

technician may arrive after 5:00 and mark the appointment as a CNR or No Access situation.

WorldCom argues that this problem not only delays the provisioning of CLEC customers' services, but also skews Verizon's reported provisioning metrics.⁴⁷²

VZ-MA acknowledges that there was a discrepancy between the stated business rules and the SMARTs Clock assignments as to the definition of an all-day appointment. According to VZ-MA, the business rules state the correct hours for an all-day appointment, and the problem was the result of an EDI coding problem. VZ-MA asserts that the EDI code was corrected on July 14, 2000, and that this situation is no longer a problem for SMARTs Clock due date assignments.⁴⁷³

Covad contends that VZ-MA's provisioning intervals for Covad's UNE-Loops are extremely long due to VZ-MA's problems with "botching installations, forgetting to do the central office wiring, provisioning loops that don't work, by not acting on facility issues, or by simply not showing up as promised."⁴⁷⁴ Covad argues that, because of these issues, between June 1 and August 15, 2000 it took Covad, on average, 35 days to get loops provisioned from

⁴⁷² VZ-MA Application, Appdx. B, Vol. 37, Tab 455, ¶ 108 (WorldCom Lichtenberg/Sivori Decl.).

⁴⁷³ VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 20 (VZ-MA August Supplemental OSS Aff.).

⁴⁷⁴ VZ-MA Application, Appdx. B, Vol. 38, Tab 462, ¶ 60 (Covad Szafraniec/Katzman Decl.).

VZ-MA.⁴⁷⁵ Covad notes that it measures its provisioning intervals from the point of first customer contact to the turning up of service because that is how the interval is seen by Covad's customers.⁴⁷⁶

VZ-MA states that Covad's claim that it takes 35 days for VZ-MA to provision Covad's loops is simply inaccurate. VZ-MA states that it provisioned over 7,000 xDSL loops for CLECs between March and June 2000 and provisioned those loops by the scheduled due date 96.5 percent of the time.⁴⁷⁷ For Covad specifically, over the period of April through June 2000, VZ-MA completed **Begin Proprietary *****End Proprietary** in an average interval of **Begin Proprietary*****End Proprietary** and had a missed appointment rate of only **Begin Proprietary*****End Proprietary**.⁴⁷⁸ Further, VZ-MA notes that the installation quality of the loops provisioned for Covad during this period was also high, with Covad opening trouble tickets on only **Begin Proprietary*****End Proprietary** of the loops within 30 days of the

⁴⁷⁵ VZ-MA Application, Appdx. B, Vol. 46, Tab 533, at 4564-65 (Transcript of Technical Session Held 8/21/00).

⁴⁷⁶ Id. at 4572.

⁴⁷⁷ VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 102 (VZ-MA August Supplemental Checklist Aff.).

⁴⁷⁸ Id. Under the C2C Guidelines, VZ-MA's provisioning intervals are calculated from the date that VZ-MA receives a complete and accurate LSR from the CLEC, not from the date of the CLEC's initial order submission, as Covad used in its interval calculations.

provisioning completion.⁴⁷⁹

iv. KPMG Findings

KPMG's evaluation of VZ-MA's wholesale provisioning processes was part of the combined POP domain. Within the EDI and GUI Functional Evaluations, KPMG assessed VZ-MA's ability to provide CLECs with desired Due Dates. KPMG also performed a review of the parity between VZ-MA's retail and wholesale provisioning processes and performance. Within its process parity review, KPMG evaluated VZ-MA's documented provisioning methods and procedures as well as VZ-MA's ability to follow those defined procedures. KPMG further examined VZ-MA's performance with respect to coordinated provisioning processes. Additionally, KPMG addressed VZ-MA's provisioning process within its capacity management evaluation. Finally, KPMG reviewed VZ-MA's provisioning performance reporting as part of its Performance Metrics review.

As part of its functional evaluations of the EDI and GUI interfaces, KPMG tested VZ-MA's ability to return provisioning due dates as requested by CLECs. Over the LSOG-2 EDI interface, KPMG reports that VZ-MA confirmed KPMG's requested due date for 94.6 percent of the orders submitted during the test. KPMG further states that 3.6 percent of the LSRCs received contained due dates later than KPMG's requested due date, and the remaining 1.8

⁴⁷⁹ Id.

percent of LSRCs were returned with due dates earlier than KPMG's requests.⁴⁸⁰ KPMG notes, however, that 87.5 percent of the modified due dates returned by VZ-MA were the result of KPMG's submission of requested due dates that did not comply with VZ-MA's standard provisioning intervals.⁴⁸¹ With respect to the LSOG-2 GUI, KPMG reports that VZ-MA confirmed 99 percent of KPMG's requested due dates.⁴⁸² Over both the EDI and GUI LSOG-4 interfaces, KPMG reports that VZ-MA did not satisfy its requirements with respect to the confirmation of requested due dates. KPMG states that VZ-MA confirmed only 92.8 percent of requested due dates over the LSOG-4 EDI interface and 92.9 percent of requested due dates over the LSOG-4 GUI.⁴⁸³ Associated with these "not satisfied" findings KPMG reported in Exception Report #16 that VZ-MA was unable to confirm KPMG's due dates for ISDN migrations in the LSOG-4 environment. KPMG attributed these errors to a lack of complete documentation for ISDN migrations in VZ-MA's Interval Guide.⁴⁸⁴ VZ-MA responded to KPMG's Exception by stating that the Interval Guide documentation is complete, and that there were two separate problems causing the incorrect due dates for KPMG's ISDN

⁴⁸⁰ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 58 (KPMG Final Report Version 1.4).

⁴⁸¹ Id.

⁴⁸² Id. at 105.

⁴⁸³ Id. at 63, 108.

⁴⁸⁴ See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #16).

migrations. The first problem involved an internal processing error that caused some orders to be assigned longer-than-standard due dates, and the second problem was related to a TIS OC training issue, in which VZ-MA's TIS OC representatives were assigning a re-configuration interval to KPMG's orders rather than the standard migration interval.⁴⁸⁵ VZ-MA states that each of these problems has been resolved and that future ISDN migrations submitted over the LSOG-4 EDI and GUI interfaces will receive the documented standard provisioning intervals.⁴⁸⁶

KPMG conducted a review of VZ-MA's defined provisioning processes to evaluate whether VZ-MA provides parity in its provisioning of retail and wholesale orders. KPMG conducted interviews with VZ-MA personnel and observed work center processes to determine whether VZ-MA's provisioning processes were "consistent, repeatable, and comparable" between retail and wholesale.⁴⁸⁷ KPMG focused its review on an assessment of VZ-MA's level of parity in provisioning systems, methods and procedures documentation, and process

⁴⁸⁵ VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (VZ-MA Response to Exception #16).

⁴⁸⁶ Because KPMG was unable to submit LSRs to retest ISDN migrations using LSOG-4 over either interface, KPMG left the related test points as "not satisfied" in its Final Report. The Department will continue to monitor VZ-MA's performance in this area in the commercial environment. See VZ-MA Application, Appdx. B, Vol. 46, Tab 545, at 4877-79 (Transcript of Technical Session Held 8/28/00).

⁴⁸⁷ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 193 (KPMG Final Report Version 1.4).

execution in the VZ-MA work centers.⁴⁸⁸ In its report, KPMG states that in most cases there is no distinction between the systems, methods, or execution of processes between wholesale and retail orders.⁴⁸⁹ KPMG notes that there are some instances where parts of the retail and wholesale order provisioning process are handled by different organizations, but states that in these cases, both organizations follow the same processes in handling their duties.⁴⁹⁰ KPMG states that in most instances the prioritization and assignment of provisioning activities is based on the due date and complexity of the specific order.⁴⁹¹ Overall, KPMG reports that VZ-MA satisfied each test point with respect to the level of parity in its provisioning processes.

KPMG also conducted a review of VZ-MA's ability to perform coordinated provisioning activities. KPMG examined the "procedures, processes, and operational environment used to support coordinated provisioning with CLECs."⁴⁹² As part of this evaluation, KPMG reviewed VZ-MA's ability to provision KPMG's test account transactions in a timely and accurate manner. KPMG also conducted a blind review of CLEC commercial

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Id.

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Id. at 195-204.

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See e.g., id. at 196 (POP-6-1-6).

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Id. at 196 (POP-6-1-5).

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VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 205 (KPMG Final Report Version 1.4).

orders to assess VZ-MA's provisioning coordination capabilities.⁴⁹³ In addition to its examination of VZ-MA's provisioning of orders, KPMG's test team also reviewed the methods and procedures for VZ-MA's provisioning organizations to assess whether the documentation available to VZ-MA technicians is adequate to enable them to perform their duties. KPMG reports that it observed VZ-MA's provisioning of standard hot-cut loop migrations, hot-cut migrations involving Integrated Digital Loop Carrier ("IDLC"), ADSL loops, DS0 loops, and DS1 loops to assess whether VZ-MA's technicians followed the defined process tasks associated with each product. With the exception of the provisioning of DS1 loops, VZ-MA's technicians performed their provisioning tasks in accordance with the defined methods and procedures at a rate of 99 percent or better.⁴⁹⁴ VZ-MA's performance with regard to DS1 loops was 93 percent.⁴⁹⁵

KPMG also reported on the timeliness of VZ-MA's provisioning for each of the installations it observed. KPMG found that 99 percent of hot-cuts were provisioned within the agree-upon frame due time, 95 percent of the hot-cuts involving IDLC were provisioned on time, and 100 percent of the reviewed DS0 loop installations were completed on time.⁴⁹⁶ With respect to the ADSL orders KPMG reviewed, KPMG notes that 9 percent of the orders could

⁴⁹³ Id.

⁴⁹⁴ Id. at 216-20.

⁴⁹⁵ Id. at 220.

⁴⁹⁶ Id. at 220-221.

not be provisioned due to a lack of suitable facilities. However, of those orders where suitable facilities existed, VZ-MA provisioned 100 percent of the orders on time.⁴⁹⁷ Finally, KPMG reports that 100 percent of the DS1 loops it observed were provisioned on time. However, KPMG notes that due to the circumstances of KPMG's orders, two of the DS1 loops were mis-wired. KPMG explains that it requested that VZ-MA terminate the DS1 loop orders to an RJ-48 block rather than to a Smart Jack, which is VZ-MA's standard provisioning policy. This difference prevented the VZ-MA technician from performing a line acceptance test that would have revealed the mis-wiring at the time of installation.⁴⁹⁸

KPMG conducted a capacity management review of VZ-MA's provisioning-related systems to assess whether VZ-MA has in place adequate procedures and tools to manage the projected growth in CLEC demands for provisioning activities. In conducting this evaluation, KPMG reviewed relevant VZ-MA documentation and conducted interviews with VZ-MA personnel.⁴⁹⁹ KPMG concludes in its report that VZ-MA's capacity management process is adequate to meet the current and projected future demands of the wholesale market for provisioning resources.⁵⁰⁰

⁴⁹⁷ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 221 (KPMG Final Report Version 1.4).

⁴⁹⁸ Id. at 222.

⁴⁹⁹ Id. at 235.

⁵⁰⁰ Id. at 235-238.

KPMG evaluated VZ-MA's methods for recording, calculating and reporting its provisioning performance metrics as part of its Performance Metrics Review. First, KPMG reviewed VZ-MA's data collection and filtering processes for the generation of metrics reports. KPMG reports that VZ-MA has in place adequate processes to collect, filter, and maintain the integrity of provisioning data.⁵⁰¹ KPMG also validated the accuracy of VZ-MA's reported provisioning metrics for the period December 1999 through February 2000. KPMG reports that it was able to verify VZ-MA's reported results for all provisioning metrics during January and February except for the PR-2-02 metrics for UNE Specials and the PR-6-02 metrics for UNE POTS provisioning.⁵⁰² KPMG notes, however, that it was unable to replicate many of the provisioning metrics for December 1999 due to VZ-MA's alteration of

⁵⁰¹ Id. at 653-654.

⁵⁰² VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 671 (KPMG Final Report Version 1.4). As part of its Exception #9, KPMG reported that VZ-MA's calculation of the Installation Quality metrics uses time frames in the numerator and denominator that do not correspond directly with each other. KPMG contended that VZ-MA's calculation of this metric did not correspond with the definition of the metric in the C2C Guidelines. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #9). VZ-MA notes that its calculation of the Installation Quality metrics has not changed since the metric was developed, and that VZ-MA's calculation reports installation troubles that occur within the reported month. VZ-MA acknowledged, however, that the definition of the Installation Quality metrics in the C2C Guidelines does not efficiently clarify the actual calculation, and issued a request to the New York Carrier Working Group to initiate a revision to the metric definition. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (VZ-MA Response to Exception #9). KPMG found this action to be sufficient to bring the definition and calculation of the Installation Quality metrics into agreement. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Disposition Report for Exception #9).

measurement algorithms without a proper a proper change control policy for recording these changes.⁵⁰³ KPMG notes in its report that the provisioning metrics it was unable to validate represented less than five percent of the total number of reported provisioning metrics.⁵⁰⁴ As stated above, the Department has verified that VZ-MA's recently implemented metrics change control process resolves the issues raised on this point by KPMG in its evaluation.⁵⁰⁵

Finally, KPMG calculated metrics, based on the C2C Guidelines, for provisioning activities performed on KPMG's test transactions. In this component of the metrics review, KPMG examined whether VZ-MA's metrics performance with regard to KPMG's test transactions met the C2C standards. Since the C2C standard for most provisioning metrics is parity with retail performance, KPMG compared the provisioning performance of its test transactions to VZ-MA's retail provisioning performance over the period in which KPMG submitted test transactions, May 11 through June 25, 2000.⁵⁰⁶ While KPMG reports that VZ-MA met the parity standard for only 46 of the 72 applicable metrics, KPMG states that 11 of the disparities involved metrics in which KPMG's data set consisted of less than four samples

⁵⁰³ VZ-MA Application, Appdx. I, Vol. 1, Tab 1 at 673 (KPMG Final Report Version 1.4). See also, above, for discussion of KPMG's findings with regard to pre-ordering and provisioning metrics change control processes.

⁵⁰⁴ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 673 (KPMG Final Report Version 1.4).

⁵⁰⁵ See Section V.B.1.e.iv, above.

⁵⁰⁶ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 697 (KPMG Final Report Version 1.4).

and ten of the missed metrics were the result of differences in order mix between KPMG's test samples and VZ-MA's retail data.⁵⁰⁷ Importantly, VZ-MA met the parity standard for each of the reported missed appointments metrics during KPMG's test.⁵⁰⁸

v. Conclusions

Based upon the evidence of record, including KPMG's evaluation of VZ-MA's provisioning processes and performance, the Department finds that VZ-MA has met the provisioning requirements of its obligation to provide CLECs with nondiscriminatory access to its OSS. While the Department recognizes that VZ-MA has had prior problems in meeting its provisioning obligations, the Department believes that VZ-MA has taken the necessary steps to resolve these problems and is currently provisioning CLEC orders at a level equal to its retail provisioning in terms of both timeliness and quality. This conclusion is supported by the results of KPMG's independent evaluation of VZ-MA's provisioning processes, which found VZ-MA's provisioning performance to be at or above defined standards in all areas.

h. Maintenance & Repair

i. Standard of Review

In order to comply with the OSS requirements of checklist item 2, a BOC must show that it provides nondiscriminatory access to its maintenance and repair functions. In recent orders, the FCC has interpreted this requirement to mean that the BOC must make available

⁵⁰⁷ Id. at 705.

⁵⁰⁸ Id. at 698-704.

“the necessary interfaces, systems, and personnel to enable requesting carriers to access the same maintenance and repair functions that [it] provides to itself.”⁵⁰⁹ The FCC has also stated that competing carriers must be able to access those maintenance and repair functions in “substantially the same time and manner” as the BOC’s retail operations. Finally, the BOC must restore service to competitors’ customers in substantially the same time and manner and at the same level of quality as it does for its own retail customers.⁵¹⁰

ii. VZ-MA’s Offering

Through its GUI Repair Trouble Administration System (“RETAS”) interface, VZ-MA allows CLECs to perform the same maintenance and repair functions that VZ-MA’s retail representatives can perform through the retail CaseWorker system. Throughout the Verizon footprint, approximately 250 CLECs are able to use RETAS to: (1) perform mechanized loop testing; (2) create trouble tickets; (3) obtain the status of a trouble ticket; (4) modify an open trouble ticket; (5) cancel a trouble ticket; (6) request a trouble report history; and (7) perform a trouble ticket service recovery.⁵¹¹ VZ-MA notes that all of the RETAS functions are available to CLECs for all service types except for the mechanized loop test, which cannot be performed

⁵⁰⁹ SBC Texas Order at ¶ 201; see also Bell Atlantic New York Order at ¶ 211.

⁵¹⁰ SBC Texas Order at ¶ 201.

⁵¹¹ VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 105 (VZ-MA May OSS Aff.).

on UNE-Loops.⁵¹² Over the first half of 2000, CLECs in Massachusetts have performed an average of 4,300 maintenance and repair transactions per month via the GUI RETAS interface, with a peak of more than 4,900 transactions performed in June 2000.⁵¹³

In May 2000, Verizon added a new manager position to the Regional CLEC Maintenance Center (“RCMC”) whose duties are to identify areas in which Verizon can improve RETAS functionality to increase CLEC use of the interface. The RCMC manager is also responsible for developing and conducting RETAS training sessions and for providing follow-up training at the CLEC work site.⁵¹⁴ VZ-MA also notes that it has made electronic bonding available to CLECs for maintenance and repair functions on a limited basis, but explains that there are few industry standards for the use of electronic bonding for the maintenance and repair of competitive local services. VZ-MA also explains that because electronic bonding is a costly process to develop, very few CLECs have shown an interest in employing this maintenance and repair option.⁵¹⁵

To ensure that CLECs have access to the functionality of the GUI RETAS system at a

⁵¹² Id. at ¶ 106.

⁵¹³ VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 84 (VZ-MA August Supplemental OSS Aff.).

⁵¹⁴ VZ-MA Application, Appdx. B, Vol. 34a, Tab 443 (VZ-MA’s Response to DTE-5-23).

⁵¹⁵ VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶¶ 121-123 (VZ-MA May OSS Aff.).

level equal to retail representatives' access to the CaseWorker system, VZ-MA has adopted various C2C metrics to report performance with respect to response times for the RETAS functions. VZ-MA follows the same response time metrics for RETAS functions that it employs for pre-order transaction responses, parity plus not more than four seconds.⁵¹⁶ For the period of April through July 2000, VZ-MA met the C2C standard for each of the Maintenance and Repair functions with the exception of the Trouble Report History function. However, while the Trouble Report History transaction performance was below the standard for April and May, the response times for this metric were within the parity plus four second standard for both June and July.

VZ-MA explains that until August 1999, the comparison between retail and wholesale response times was out of parity due to a difference in the type of transactions that were included in each set of calculations. VZ-MA states that wholesale "Create Trouble Ticket" transactions included automatic feature fix transactions, which have a longer transaction response time because the transaction tries to fix the trouble at the time the ticket is created.⁵¹⁷ This type of automatic fix was not part of the retail transaction metrics, so VZ-MA began to exclude these transactions from wholesale reporting in August 1999.⁵¹⁸ VZ-MA notes that a

⁵¹⁶ VZ-MA Application, Appdx. B, Vol. 32a, Tab 423, ¶ 88 (VZ-MA May Measurements Aff.).

⁵¹⁷ VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 114 (VZ-MA May OSS Aff.).

⁵¹⁸ Id.

similar difference between retail and wholesale metrics reporting was corrected in December 1999. In the December 1999 situation, VZ-MA notes that wholesale response times were including the time used to verify the CLEC's ownership of the line being reported or checked. Since there is no retail analogue to this part of the CLEC's transaction, VZ-MA began excluding these verification times from the metrics in December 1999.⁵¹⁹ Finally, VZ-MA notes that it enhanced the response times for CLEC transactions in February 2000 by implementing systems changes that enhanced software capabilities by moving frequently used data elements to the RETAS core memory.⁵²⁰

VZ-MA measures the timeliness of its restoration of CLEC customers' service against a standard of parity with its own retail repair services. VZ-MA uses three performance metrics to show that it is providing parity between retail and wholesale customers – mean time to repair, missed appointments, and duration out-of-service.⁵²¹ VZ-MA notes that there are a number of factors that affect the level of parity between wholesale and retail performance on VZ-MA's service restoration timeliness metrics. First, VZ-MA notes that many CLECs do not accept weekend appointments when they are offered because the CLECs' customers are often available only during business hours. VZ-MA explains that in these instances, though

⁵¹⁹ Id. at ¶ 115.

⁵²⁰ Id. at ¶ 117.

⁵²¹ VZ-MA Application, Appdx. B, Vol. 32a, Tab 423, ¶¶ 92-95 (VZ-MA May Measurements Aff.).

VZ-MA is able to offer a short repair interval, the mean time to repair and duration out-of-service metrics only show the extra weekend days as being additional time that a CLEC customer's line is in need of repair.⁵²² Further, VZ-MA notes that during the months of April through June 2000 VZ-MA's performance metrics reported repair intervals refused by CLECs as being missed appointments.⁵²³

For resale and UNE-P lines, VZ-MA's Loop Maintenance and Operations System ("LMOS") database assigns the next available repair interval automatically. LMOS also handles assignment of repair intervals for retail customers and does not distinguish between retail and wholesale customers in assigning repair appointments.⁵²⁴ For UNE-Loop troubles, which are handled through WFA, VZ-MA cannot coordinate the repair intervals with those assigned through the LMOS database. However, VZ-MA notes that it has made a number of revisions to its UNE-Loop repair interval offerings. For example, in April 2000 VZ-MA began allowing same-day repair intervals for troubles reported by 10:00 a.m., and replaced the 24-hour rolling repair interval with an interval of either same-day or next-day by 7:00 p.m.⁵²⁵ VZ-MA's maintenance and repair performance for both resale and UNE-P services over the

⁵²² VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶¶ 134-135 (VZ-MA August Supplemental Checklist Aff.).

⁵²³ Id. at ¶ 136.

⁵²⁴ VZ-MA Application, Appdx. B, Vol. 34a, Tab 443 (VZ-MA's Response to DTE-5-22).

⁵²⁵ Id.

period of April through July 2000 has been strong, with the missed appointment rate for April UNE-P troubles being the only metric in which VZ-MA's wholesale performance failed to meet parity with the retail rates. However, VZ-MA's maintenance and repair performance for UNE-Loops over the same period is not as strong for a number of reasons. First, as noted above, the mean time to repair intervals and duration out of service metrics do not accurately relate VZ-MA's performance because of the high rate of CLEC customers that reject offered weekend appointments. Further, as described more fully below, the nature of the trouble detection process for UNE-Loops is much more complex than with resale and UNE-P services and is highly dependent on the CLEC's loop testing capabilities. VZ-MA states, therefore, that its maintenance and repair metrics are not indicative of the quality of service it provides to CLECs that purchase UNE loops.

VZ-MA measures the quality of its wholesale maintenance and repair services through its trouble report rate and repeat trouble rate. VZ-MA's trouble report rate is reported separately for retail, resale, UNEs, and interconnection trunks, and wholesale performance is measured against parity with retail performance.⁵²⁶ The most telling measure of the quality of VZ-MA's restoration of service is the repeat trouble rate. The repeat trouble rate measures the percentage of troubles that are reported within thirty days of the closure of a trouble ticket on

⁵²⁶ VZ-MA Application, Appdx. B, Vol. 32a, Tab 423, ¶ 90 (VZ-MA May Measurements Aff.).

the same line.⁵²⁷ For the period April through July 2000, VZ-MA's reported trouble rates and repeat trouble rates for resale, UNE-Platform, and basic UNE-Loops have been in parity with analogous retail services in every month. The wholesale services that have missed parity over this period are VZ-MA's trouble rate for UNE 2-wire xDSL loops in each month and for UNE 2-wire digital loops in June and July. The differences between these trouble report rates and their retail equivalents, however, are minimal. VZ-MA also missed the parity standard for repeat trouble reports for UNE 2-wire digital loops in May, June, and July 2000. However, as explained below, due to the nature of UNE-Loop trouble detection and reporting, VZ-MA's performance in fixing loop troubles is heavily dependent on the CLEC's direction as to the source of the reported trouble.

iii. Competitors' Positions and VZ-MA's Response

CLEC complaints over VZ-MA's ability to provide parity in its maintenance and repair function center on the perceived inability of VZ-MA to repair CLEC-reported troubles without the need for subsequent reports. Covad contends that it must often open multiple tickets for each trouble because VZ-MA erroneously closes out trouble tickets with a report of No Trouble Found ("NTF"). Covad argues that this problem causes Covad's customers to endure extended service outages and forces Covad to pay for multiple trouble tickets.⁵²⁸ Rhythms

⁵²⁷ Id. at ¶ 91.

⁵²⁸ VZ-MA Application, Appdx. B, Vol. 38, Tab 462, ¶¶ 68-70 (Covad Szafraniec/Katzman Decl.).

raised similar complaints with VZ-MA's maintenance and repair capabilities and provided examples of trouble ticket logs that show extended service outages and frequent escalations of trouble tickets.⁵²⁹

VZ-MA explains that a significant portion of the problems cited by Covad and Rhythms relate to the nature of the maintenance and repair process for UNE-Loops. Unlike resale and UNE-P configurations, in which the CLECs use VZ-MA's systems to test the loops and locate the source of the trouble, CLECs must perform their own testing of UNE-Loops to determine the source of the trouble and report that trouble to VZ-MA. VZ-MA explains that if a CLEC opens a trouble ticket and identifies the wrong location for the trouble, the VZ-MA technician will likely report an NTF situation to the CLEC. VZ-MA agrees that there are instances in which an initial NTF report is followed by a subsequent trouble ticket, but states that in most cases the NTF is the result of the CLEC's misdirection as to the location of the trouble.⁵³⁰ VZ-MA states that when it receives a trouble ticket on a UNE-Loop from a CLEC, it assumes that the CLEC has already tested the line to determine the source of the trouble, but that this is not always the case. For example, VZ-MA notes that between April 15 and June 15, 2000, 55.6 percent of Covad's reported troubles resulted in NTF reports. Of those that were reported as NTF, Covad submitted subsequent reports on only 46.2 percent of the loops, and only 16.8

⁵²⁹ VZ-MA Application, Appdx. B, Vol. 38, Tab 462, ¶¶ 21-22 and Att. 2 (Williams Decl.).

⁵³⁰ VZ-MA Application, Appdx. B, Vol. 34a, Tab 443 (VZ-MA's Response to DTE-5-20).

percent of the NTF reports were later found to have actual troubles with the loop.⁵³¹ With respect to the specific cases cited by Rhythms, VZ-MA notes that in several instances VZ-MA missed its repair appointment because it was unable to reach Rhythms to schedule a joint testing of the line. VZ-MA states that in the other cases, VZ-MA found no trouble on the portion of the line identified by Rhythms and closed the trouble ticket according to procedures.⁵³²

iv. KPMG Findings

KPMG performed a thorough examination of VZ-MA's maintenance and repair systems as part of its OSS evaluation. KPMG reviewed a total of 220 test points in the Maintenance and Repair Domain, and found that VZ-MA satisfied each test point.⁵³³ KPMG's Maintenance and Repair evaluation included examinations of the functional capacity of the RETAS interface, the ability of RETAS to handle projected future volumes, the parity between VZ-MA's retail and wholesale maintenance and repair processes, the adequacy of VZ-MA's published documentation related to the maintenance and repair process, and the adequacy of

⁵³¹ VZ-MA Application, Appdx. B, Vol. 34a, Tab 443 (VZ-MA's Response to DTE-5-11).

⁵³² VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 148 (VZ-MA August Supplemental Checklist Aff.). VZ-MA's performance with respect to the maintenance and repair of UNE Loops is discussed in detail under checklist item 4. See Section V.D., below.

⁵³³ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 12 (KPMG Final Report Version 1.4).

VZ-MA's procedures to manage projected growth in CLEC usage of the RETAS interface.

KPMG also reviewed VZ-MA's maintenance and repair performance metrics reporting as part of its Performance Metrics review.

KPMG's review of the functionality of the GUI RETAS interface consisted of two primary components. First, KPMG examined whether the RETAS interface performed wholesale maintenance and repair functions in the manner in which it was designed. KPMG developed test transactions and submitted them to VZ-MA in the formats proscribed in the RETAS documentation, testing whether the received responses matched KPMG's expected results. KPMG performed test transactions on each of the available RETAS functions and received satisfactory responses for each transaction.⁵³⁴ Further, KPMG also measured the response times for functional acknowledgments and responses for each of its test transactions. KPMG reports that the RETAS interface provided functional acknowledgments "almost instantaneously" for each transaction type, and that the transaction responses were received within the time frames set out in VZ-MA's RETAS documentation.⁵³⁵

The second component of KPMG's RETAS functionality evaluation was a comparison of the wholesale RETAS functionality to VZ-MA's retail Caseworker system. KPMG examined the level of parity between RETAS and Caseworker for each of the maintenance and repair functions and found that in almost every case the two systems offer parity in

⁵³⁴ Id. at 247-248.

⁵³⁵ Id. at 249-250.

functionality. Most of the functionality that KPMG reports as not being identical involves situations in which CLECs have greater functionality than do retail representatives using Caseworker. For example, KPMG notes that while RETAS provide trouble history data for up to three years, Caseworker maintains trouble history data for only 45 days.⁵³⁶ Also, retail representatives using Caseworker do not have the ability to perform automated tests on special circuits, as RETAS allows, but rather must access the Delphi system directly.⁵³⁷ The lone exception to the level of parity in functionality reported by KPMG lies in the service recovery function, which enables a customer to establish a temporary means of maintaining service during a reported trouble (i.e., automatic call forwarding or transfer to voice mail services). KPMG reports that while retail representatives are simply trained to avoid submitting service recovery transactions unless a trouble report has a long repair interval, the RETAS interface prevents CLECs from submitting this type of transaction unless a reported trouble is in a “Pending Dispatch” or “Dispatch Out” status.⁵³⁸

KPMG also tested the capability of VZ-MA’s RETAS interface to handle projected future volumes of maintenance and repair transactions. KPMG conducted its volume performance test in two phases. The first phase tested RETAS’ ability to receive and respond

⁵³⁶ Id. at 259.

⁵³⁷ Id. at 258.

⁵³⁸ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 259 (KPMG Final Report Version 1.4).

to transactions at projected volumes for September 2000. The second phase of the volume test was conducted using projected December 2000 volumes, and was conducted in conjunction with the volume testing performed as part of KPMG's review of VZ-MA's POP systems. KPMG sent transactions for each phase of the volume test at projected normal, peak (150 percent of normal), and stress (240 percent of normal) volumes for the specified time period. KPMG reports that it experienced no significant degradation of RETAS performance during the conduct of these volume tests.⁵³⁹

In addition to examining the parity VZ-MA offers through its maintenance and repair interfaces, KPMG also evaluated VZ-MA's ability to repair CLEC-reported troubles in a nondiscriminatory manner. KPMG conducted a review of the defined processes for VZ-MA repair technicians to assess whether any differences between wholesale and retail processes exist. KPMG also evaluated VZ-MA's actual performance in performing maintenance and repair work on wholesale accounts to determine whether VZ-MA's technicians follow their proscribed processes and perform their duties on a nondiscriminatory basis.⁵⁴⁰ KPMG reports that while wholesale and retail troubles are reported through different interfaces and to

⁵³⁹ Id. at 278-80. KPMG notes that while the success rate for the Switched Access Remote Testing System ("SARTS") transaction declined from normal to peak and from peak to stress volumes, the decline was not considered to be statistically significant. Id. at 278. Further, KPMG also notes that the response times for the extended trouble report history transaction increased as the volume test progressed, but explains that these increases are the result of the growing size of the transaction responses as more troubles were reported against individual accounts. Id. at 280.

⁵⁴⁰ Id. at 299.

different organizations within VZ-MA, VZ-MA's internal organizations utilize the same back-end interfaces to perform their maintenance and repair functions.⁵⁴¹ Additionally, KPMG notes that repair intervals and due dates are assigned to wholesale and retail accounts using the same LMOS or WFA system.⁵⁴² KPMG also reports that VZ-MA performed 100 percent of the repair functions examined in the end-to-end evaluation of actual trouble repairs in an accurate and timely manner.⁵⁴³

As a separate part of its Maintenance and Repair process parity evaluation, KPMG also examined the processes VZ-MA follows in carrying out its coordinated, or joint, meet activities with CLECs. In determining that VZ-MA has adequate procedures and processes in place for conducting joint meets with CLECs, KPMG reviewed both VZ-MA internal and published documentation defining the process. KPMG determined, based on these reviews, that VZ-MA has sufficient processes in place to conduct joint meet activities. KPMG further reports that while there is no specific training on joint meet procedures for VZ-MA technicians, the joint meet process does not involve any activities that a technician is not trained to perform on an individual basis.⁵⁴⁴

⁵⁴¹ Id. at 309.

⁵⁴² Id. at 310.

⁵⁴³ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 312-313 (KPMG Final Report Version 1.4).

⁵⁴⁴ Id. at 368-372.

KPMG also evaluated the completeness and accuracy of VZ-MA's maintenance and repair-related documentation. KPMG's review applied three general criteria – coverage adequacy, explanatory effectiveness, and usability – to each of VZ-MA's published maintenance and repair documents and VZ-MA's online RETAS help facility.⁵⁴⁵ KPMG reports that VZ-MA satisfied the defined test criteria for each of the documentation sources reviewed.⁵⁴⁶

KPMG also reviewed VZ-MA's capacity management procedures for the RETAS interface systems as part of its overall examination of VZ-MA's OSS capacity management process. Through interviews with VZ-MA personnel and reviews of available documentation,

⁵⁴⁵ Id. at 315.

⁵⁴⁶ Id. at 318-336. KPMG's Observation Report #10, issued on January 4, 2000, identified various discrepancies between the RETAS on-line help function and the RETAS Student User Guide. KPMG noted that the on-line help function cited incorrect portions of the Student User Guide for more detailed information regarding certain RETAS functions. Appdx. K (Observation Report #10). VZ-MA corrected the inconsistencies noted by KPMG in the June 2000 release of the RETAS Student User Guide. Appdx. M (KPMG Observation Status Summary dated August 25, 2000). KPMG also issued Exception Report #2 on February 1, 2000, noting that the then-current October 1999 RETAS Student User Guide did not contain adequate documentation to assist CLECs in the creation of trouble tickets for UNE Loops, IOF circuits, and DS1 loops. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #2). In response to this exception, VZ-MA added detailed information and examples in the March 2000 version of the Student User Guide to assist CLECs in the creation of trouble tickets for the identified service types. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (VZ-MA Response to Exception #2). KPMG notes in its Disposition Report for Exception #2, released May 9, 2000, that VZ-MA's revisions to the RETAS documentation were found to be sufficient to meet CLECs' needs. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Disposition Report for Exception #2).

KPMG evaluated the adequacy of VZ-MA's process for recording and analyzing usage trends and assessed whether VZ-MA used such information effectively in ensuring that its maintenance and repair systems and interfaces would be able to meet growing and changing CLEC needs. KPMG reports that VZ-MA does have the necessary processes and plans in place to meet its capacity management requirements.⁵⁴⁷

Finally, as part of its Performance Metrics Review, KPMG evaluated VZ-MA's methods for recording, calculating and reporting its maintenance and repair performance metrics. KPMG reviewed VZ-MA's systems and processes used in the collection and filtering of data for metrics generation purposes, and reports that VZ-MA has in place adequate systems and processes to maintain the integrity of raw maintenance and repair data in its metrics reporting.⁵⁴⁸ KPMG also validated VZ-MA's reported maintenance and repair metrics for the period from December 1999 through February 2000. KPMG states that its calculations agreed with VZ-MA's reported performance for all metrics with only minor discrepancies in four areas.⁵⁴⁹ Two of the metrics KPMG states it was unable to validate, Percent Troubles with NTF results and Percent Missed Appointments due to customer reasons, are measurements that

⁵⁴⁷ VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 293-298 (KPMG Final Report Version 1.4).

⁵⁴⁸ Id. at 654-655.

⁵⁴⁹ Id. at 676-677.

VZ-MA reports for analysis only and do not have defined C2C standards.⁵⁵⁰

v. Conclusions

Based on the reported performance measures and the positive report from KPMG, the Department finds that VZ-MA makes the maintenance and repair functions of its Operation Support Systems available to competitors on a nondiscriminatory basis. While the Department recognizes that VZ-MA's maintenance and repair performance with respect to UNE-Loops has been below the approved standards, the Department agrees with VZ-MA that this performance is at least partly the result of the CLEC's ability to direct VZ-MA accurately to the source of reported troubles. VZ-MA's position is confirmed by KPMG's report that VZ-MA successfully responded to 100 percent of KPMG's reported troubles during the end-to-end process evaluation.

i. Billing

i. Standard of Review

The ability of a CLEC to obtain the necessary information to bill its end customers is vital to the success of competition in the local marketplace. The BOC must provide competitors with "complete and accurate reports of the service usage of competing carriers' customers in substantially the same time and manner that [it] provides such information to

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Id.